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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,944	07/15/2003	Christopher R. Wilson	1033-SS00401	6802

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EXAMINER
STERRETT, JONATHAN G

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/619,944	WILSON ET AL.
	Examiner	Art Unit	
	Jonathan G. Sterrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1-12-06*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14,16-26,28-36,38 and 39* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-12,14,16-26,28-36,38 and 39* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 3232006

DETAILED ACTION

Summary

1.   This **Final Office Action** is responsive to applicant's amendment filed January

12, 2006. Currently **Claims 1-12, 14, 16-26, 28-36, 38 and 39** are pending.

Response to Arguments

2.   The applicant's arguments have been fully considered regarding **Claims 1-12,

14, 16-26, 28-36, 38 and 39**, but they are not persuasive.

3.   The applicant argues that Weigel and Bogart should not be combined, because

Weigel addresses technician's driving to service locations and Bogart addresses

performance evaluation of agents in call centers.

The examiner respectfully disagrees.

In response to applicant's argument that there is no suggestion to combine the

references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention

where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re

Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Weigel and Bogart are both addressing workforce scheduling and

implement different approaches, albeit not where the different approaches are such that

combining them destroy either of the references. As noted, Weigel does not take into account average service time from the past, however, Weigel does track the service time that a technician requires. Furthermore, Weigel highlights the importance of meeting a scheduling window for a particular service call. It is inherent in Weigel's approach that if the technician takes 10 hours for a call versus 2 hours, that this would impact subsequent scheduling and routing, therefore, the time a technician takes to perform a service call is not irrelevant to Weigel. The examiner further notes that Weigel does take average travel time as a scheduling input into account. At the time of the invention, optimizing Sear's home appliance repair scheduling in terms of effective route planning was the primary goal, however, this is not to say that the time taken by the service technician was of no importance, for indeed Weigel notes that service time is tracked. Bogart notes that over time, technicians tend to improve their performance, and this improvement should be taken into account when determining how calls (i.e. service orders) should be scheduled against available technicians. Bogart notes that his invention tends to optimize the overall performance of a service organization. Bogart's invention accurately forecasts how long a technician would take to handle a service call, because it takes into account past history of the technician's performance. One of ordinary skill in the art would find motivation to combine the teachings of Weigel with Bogart to improve the overall performance of a service organization with a reasonable expectation of success. The fact that one scheduling invention addresses where technician's are stationary, i.e. the work goes to the technician; and the other invention takes into account geography, i.e. the technician goes to the work; is irrelevant

in combining the two approaches because both approaches are addressing scheduling

a service workforce taking a multitude of constraints into account, including service time

and past historical performance.

4.   The applicant argues that neither Weigel nor Bogart teaches "a service support

system that includes a service assignment module configured to assign a service

request to a technician from a pool of available technicians based at least in part on a

historical technician performance statistic, where the historical technician performance

statistic includes an average time at a service location associated with a service order

before completing a requested service associated with the service order as recited in

claim 1".

        The examiner respectfully disagrees.

        Both Weigel and Bogart teach a service support system that includes an

assignment module for assigning service requests for technicians. Weigel takes into

account historical averages in travel time. Weigel also takes into account, the service

time that a technician spends on a call. Bogart teaches a weighted average for

technician service performance (including for service time – call handling time), where

more recent performance numbers are more heavily weighted. The rejection of Claim 1

is made using a combination of Weigel and Bogart, as noted above, with a reasonable

expectation of success.

5.   Applicant has attempted to challenge the examiner's taking of Official Notice on

page 9 para 3; however applicant has not provided adequate information or argument

so that *on its face* it creates a reasonable doubt regarding the circumstances justifying

the Official Notice. Therefor, the presentation of a reference to substantiate the Office

Notice is not deemed necessary. The examiner's taking of Official Notice has been

maintained.

        Although it is not necessary, the applicant is directed to the following reference in

support of the Official Notice: Fedex's webpage of June 6, 1997, which shows a web

interface for obtaining service status information.

6.   The applicant argues that neither Weigel nor Bogart teaches "wherein the user

interface is a web enabled interface" (The applicant's argument addresses an Official

Notice taken on Claim 11, however no Official Notice was taken).

        The examiner respectfully disagrees.

        Weigel teaches a transaction monitoring system for monitoring large scale

transactions that occur in a database application running scheduling algorithms. The

article states 'the transaction procession (TP) monitor technology originally developed

for internet applications'. Furthermore on page 129 column 1 para 2 line 5-8, Weigel

describes the development of 'applications in internet mapping and routing'. The

examiner interpets 'applications in internet mapping and routing' to mean applications

provided over the internet in mapping and routing to include a web-enabled user

interface for the user to access.

7.   The applicant argues that neither Weigel nor Bogart teaches "at least one web

page configured to access an order status monitoring module", as cited by Claim 28.

        The examiner respectfully disagrees.

        This limitation is taught by a limitation of Weigel, Bogart and Official Notice, as is

noted for Claims 4 and 5 below. It is old and well known in the art for a web-based

order status interface to provide a web page to access an order status monitoring

module. This uses the widespread availability of the internet to make it easy to access

order information wherever internet access is provided. As noted above, this capability

was provided by FedEx on the internet beginning at least in 1997. One of ordinary skill

in the art would have a reasonable expectation of success to combine Weigel, Bogart

and the Official Notice to not only schedule and track technician's, as is discussed, but

also would experience the ease of being able to access the order status over the

internet.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   **Claims 1-12, 14, 16-26, 28-36, 38 and 39** are rejected under 35 U.S.C. 103(a)
as being unpatentable over **Weigel** in view of **Bogart US 6,163,607** (hereinafter
Bogart).

       Weigel, Don; Cao, Buyang; "Applying GIS and OR Techniques to Solve Sears
Technician-Dispatching and Home Delivery Problems", Jan/Feb 1999, Interfaces, 29, 1,
ABI/INFORM Global, p.112.

       Regarding **Claim 1**, Weigel teaches:

       **a service request interface configured to communicate with a service
request system;**

       Page 113 paragraph 3 line 15-16, customers call in to communicate with the
service request system.

       Page 114 column 2 line 13-14, the EHDS/CARS interfaces with the mainframe to
receive service orders.

       **a dispatch system interface configured to communicate with a dispatch
system; and**

       Page 114 column 2 line 15-17, system uploads dispatching information, i.e.
through a dispatch system interface configured to communicate with a dispatch system.

       a service assignment module configured to assign a service request to a
technician from a pool of available technicians based on their skills and abilities

Page 116 column 1 line 20-26, the system (i.e. service assignment module)
assigns service requests to technicians from a pool based on their skills and abilities to
provide repair, i.e. their primary and secondary skills.

the service request received via the service request interface,

Page 114 column 2 line 13-14, the EHDS/CARS interfaces with the mainframe to
receive service orders

**the service assignment module notifying the technician of the service
request via the dispatch system interface.**

Column 2 line 15-18, system has eliminated dispatchers from communicating
with local workforce, thus the system notifies the technicians directly from the dispatch
system interface.

Page 115 Figure at top of page – the technician is automatically provided with
service manifests, directions and maps, i.e. notified of the service request through this
interface.

**wherein the historical technician performance statistic includes an average
tavel time to reach a service location associated with a service order and where
service times at service locations are tracked.**

Page 116 column 1 line 26-29, average travel time is average completion time of
a task associated with the service request since traveling to the location requiring
service is a task associated with the service request.

Page 116 column 2 line 19-20 total service time is tracked for service calls (note
transit time is tracked as a separate entity).

Weigel does not teach:

Assigning a technician based at least in part on a historical technician performance statistic;

wherein the historical technician performance statistic includes an average time at a service location associated with a service order before completing a requested service associated with the service order

Bogart teaches:

Assigning a technician based at least in part on a historical technician performance statistic.

Column 3 line 20-25, technicians historical performance is used to assign calls – see also column 5 line 36-40, call assignment is based on this historical performance.

wherein the historical technician performance statistic includes an average time at a service location associated with a service order before completing a requested service associated with the service order.

Column 5 line 10-15; line 18-20, the historical technician performance statistic is a weighted average of prior performance. The service location is the technician's location in the call center where the technician is handling calls (i.e. service orders).

Column 4 line 58, call duration is tracked and stored in the database as an historic performance metric.

Weigel and Bogart both address providing workforce scheduling, thus both

Weigel and Bogart are analogous art.

Bogart teaches that scheduling an employee based on their historical

performance helps maximize the performance of an organization by taking the individual

performance level of the employees into account (column 3 line 6-10).   Bogart further

teaches that using a weighted average takes historical performance into account, but

places a greater weight on performance that is more recent, to take into account

improvements in performance the technician may experience over time.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the teachings of Weigel, regarding providing a service technician

scheduling system, to include the step of basing scheduling at least in part on historical

employee performance, as taught by Bogart, because it would maximize the

performance of an organization by taking the individual performance level of the

employees into account.

Regarding **Claim 2**, Weigel teaches:

a geo-location interface configured to access a geo-location system, the

geo-location system indicating a location of the technician and

page 119 column 1 line 31-35, the system accesses a GIS system to indicate

location of a centroid (seed point) that indicates a location of the technician.

wherein the service request is assigned based at least in part on the

location of the technician.

Page 119 column 1 line 39-41, the system takes into account the technician's

seed point (centroid) location when assigning service orders.

Regarding **Claim 3**, Weigel teaches:

a service request status interface for accessing status data associated with

the service request.

Column 2 line 13-19, the system provides online reports (i.e. through a service

request status interface). These reports provide status data associated with the service

request including various times, e.g. start and total service time.

Regarding **Claim 4**, Weigel teaches an online service request status interface, as

per above in Claim 3, but does not teach:

wherein the service request status interface is a web-based interface, as

per Claim 4 or **wherein the service request status interface is accessible by a**

competitive local exchange carrier, as per Claim 5.

However, Official Notice is taken that it is old and well known in the art for

interfaces, including status request interfaces, to be web-based, as per Claim 4 or

accessible through internet dialup (i.e. accessible by a CLEC). Providing web-based

status interfaces (as per Claim 4) including those accessible through a dial-up

connection (i.e. through a CLEC as per Claim 5) enable customers to access status

inquiries flexibly from a variety of locations since they are accessing the interface

through the internet.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the teachings of Weigel, regarding providing a service technician

scheduling system and online status reporting, to include the step of providing a web-

based status interfaces (as per Claim 4) including those accessible through a dial-up

connection (i.e. through a CLEC as per Claim 5) because it would provide customers

with flexibility in accessing a service request status since they are accessing the

interface through the internet.

Regarding **Claim 6**, Weigel teaches:

a system interface configured to access a operation management system,

Page 114 column 2 line 13-15, Sears mainframes interfaces with the

CARS/EHDS system (i.e. the operation management system since it manages both

delivery and service requests).

the service assignment module configured to transfer service requests to the operation management system via the system interface.

Page 114 column 2 line 13-15, and Figure 2, page 115, CARS/EHDS receive service requests from the mainframe through the system interface.

Note the use of the term "frame" and "frame related" above comprise non-functional, descriptive language.

Also, it would have been obvious to adopt the above service system to a frame system to provide frame related service requests since it is old and well known in the art the frame systems require service and service requests.

Regarding **Claim 7**, Weigel does not teach:

a scoring interface configured to access a technician scoring system, the technician scoring system storing an efficiency scoring associated with the technician.

Bogart teaches:

a scoring interface configured to access a technician scoring system, the technician scoring system storing an efficiency scoring associated with the technician

Column 2 line 25-30, the system (i.e. a scoring interface) stores scoring information (i.e. an efficiency) based on the employee's (i.e. technician's) performance during the last call-see also column 4 line 55-60.

Weigel and Bogart both address providing workforce scheduling, thus both Weigel and Bogart are analogous art.

Bogart teaches that scheduling an employee based on their historical performance helps maximize the performance of an organization by taking the individual performance level of the employees into account (column 3 line 6-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel, regarding providing a service technician scheduling system, to include the step of storing an employee's efficiency scoring, as taught by Bogart, because it would maximize the performance of an organization by taking the individual performance level of the employees into account.

Regarding **Claim 8**, Weigel teaches:

a statistical knowledge interface configured to access a statistical knowledge system, the statistical knowledge system storing statistical data associated with the service request.

Page 116 column 1 line 11-15 & 26, the assignment rules module accesses the system to store statistical information associated with the service request. In this case the statistical data is average travel time.

Regarding **Claim 9**, Weigel teaches tracking the number of completed service calls (i.e. requests), page 127 Table 2 "Completed Calls".

Weigel does not teach:

a billing system interface configured to communicate with a billing system, the billing system to receive completion data associated with the service request.

Official Notice is taken that it is old and well known in the art that Sears has a billing system to ensure customers are billed for the fulfillment of their service request.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel, regarding tracking the completion of service requests to include interfacing said completion data with a billing system to ensure that customers are billed upon the completion of service requests.

Regarding **Claim 10**, Weigel teaches:

a user interface to provide data associated with the technician.

Page 116 column 1 line 11-14, the assignment module allows entry of data

associated with the technician to be entered and customized (i.e. thus a user interface).

Regarding **Claim 11**, Weigel teaches:

wherein the user interface is a web enabled interface.

Page 128 Column 2 line 18-25, the user interface used in assigning service

requests, is also included in a web-based (i.e. web-enabled) application.

Regarding **Claim 12**, Weigel teaches the web enabled interface as per Claim 11

above, but does not teach:

wherein the user interface includes a JAVA component.

However, Official Notice is taken that it is old and well known in the art for a web

application for an interface to include a Java component. The java language provides a

way to easily and robustly incorporate various functionalities into a web browser.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the teachings of Weigel and Bogart, regarding providing service

dispatch capability and a web-based user interface, to include the step of wherein the

user interface includes a Java component, because it provides an easy and robust way

to incorporate various functionalities into a web browser.

Regarding **Claim 18**, Weigel and Bogart teaches the limitations above, but do not teach:

A web-based order status reporting interface.

However, Official Notice is taken that it is old and well known in the art to provide web-based order status reporting interface, so that the order status can be easily accessed using the internet.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel and Bogart, regarding providing for technician scheduling and dispatching based on historical performance, to include the step of including a web-based order status reporting interface, because it would enable the order status to be easily accessed using the internet.

Claims 14, 16, 17, 19-26, 28-36, 38 and 39 recite similar limitations as those recited in **Claims 1-12 and 18** above, and are therefore rejected under the same rationale.

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fedex.com web.archive.org's webpage of June 6, 1997, "Fedex Standard Tracking".

Hickey, Kathleen, "Right Place, Right Time", Nov 1999, Traffic World, v260, n4, p47, Dialog 06791905 57430340.

PRNewswire, "PointServe Launches Breakthrough On-Line Scheduling Solutions to Dramatically Improve the Reliability of Home and Business-Oriented Service Delivery Regional Rollout to Begin in Salt Lake City on Nov 1; National Launch Slated for Early 2000", Oct 1999, p.1, ProQuest ID 45806204.

Satran, Dick, "Rocket Scientist tries improving service industry", Oct 1999, Vancouver Sun, Vancouver, B.C., p.E2, ProQuest ID 08321299.

Hall, John, R; "New Service Website Holds Promise for Contractors", Nov 1999, Air Conditioning, Heating & Refrigeration News; 208, 13; ABI/INFORM Global, p.1.

US 6578005 by Lesaint discloses a method and apparatus for resource allocation and scheduling of telecommunication field workers.

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JGS 3-23-2006

SUSANNA M. DIAZ
PRIMARY EXAMINER

AU 3623